position and freezer-stored until they could be subsampled.

Three deeper cores (3 to 4 meters in length) were taken at selected locations (Fig 5). These 9 centimeter PVC cores were obtained using a portable vibracore system mounted on the boat. These long cores were utilized to determine the pre-anthropogenic sediment characteristics and to determine rates and changing patterns of sedimentation within the estuarine system through time.

LABORATORY METHODOLOGY

Sediment Sub-Sampling Procedures

Analytical procedures were developed in accordance with the Quality Assurance/Quality Control Report submitted when the project was accepted for funding in June 1987. All procedures associated with sample preparation and storage were done in a trace-element clean manner for avoidance of sample contamination. Sub-sampling involved production of two sets of uniform and homogenous samples for the following purposes. The first sample set was used for the sedimentological lab analyses and is discussed in this section. The second sample set was prepared for chemical analyses and will be discussed in the next section entitled Chemical Analytical Procedures. All remaining sample material from both the sedimentological and chemical analyses have been archived for future reference and subsequent analyses. Following sub-sampling, the remaining core material was not saved due to lack of storage facilities.

For sub-sampling (Fig. 7), each core was allowed to thaw around the core liner until the solid sample could be extruded from the core liner. Cores were extruded horizontally into individual trays and allowed to completely thaw; pore waters were kept with the sediment as thawing occurred. The lithologic characteristics of each core were described. Two to four sub-samples of 10 cm thickness were obtained at vertical intervals down the core. Sampled intervals for every core included a surface sample containing the top ten cm of sediment and a bottom interval containing the lowermost 10 cm. If the core was longer than 30 cm, one or two additional 10 cm samples were obtained between the surface and bottom samples depending upon the core length and lithologic variability. Samples from each interval were homogenized and divided into two splits for sedimentologic and chemical analyses.

A total of 153 cores have been described and subsampled. This resulted in 344 subsamples distributed regionally as outlined in Table 6 and were analyzed as follows (Fig. 7):

a. Core and Sediment Description
b. Sediment Composition (% water, % organic, and % inorganic)
c. Grain Size Analysis (% sand, % silt, and % clay)
d. Chemical Analysis (Table 7)
    ICAPES (quantitative for 22 elements; Table 7)
    AA Spectrophotometry (quantitative for mercury; Table 7)
    Electrometric determination of fluorine based on specific ion electrode measurements (quantitative; Table 7)
    EDXRF (qualitative and semi-quantitative for 30 elements; Table 8).